

INTEGRATED PREPARATION OF BLENDING COMPONENTS FOR REFINERY TRANSPORTATION FUELS

ABSTRACT OF THE INVENTION

5 Economical processes are disclosed for production of
components for refinery blending of transportation fuels which are
liquid at ambient conditions by selective oxygenation of refinery
feedstocks comprising a mixture of organic compounds. The organic
10 compounds are oxygenated with dioxygen in a liquid reaction
medium containing a soluble catalyst system comprising at least
one multi-valent and/or heavy metal while maintaining the liquid
reaction medium substantially free of halogen and/or halogen-
15 containing compounds, to form a mixture of immiscible phases
comprising hydrocarbons, oxygenated organic compounds, water of
reaction, and acidic co-products. The mixture of immiscible phases
is separated by gravity to recover at least a first organic liquid of
low density and second liquid of high density which contains at
20 least a portions of the catalyst metal, water of reaction and acidic
co-products. Advantageously, the organic liquid is washed with an
aqueous solution of sodium bicarbonate solution, or other soluble
chemical base capable to neutralize and/or remove acidic co-
products of oxidation, and recover oxygenated product.

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